Canadian Centre for Occupational Health and Safety

Centre canadien d'hygiène et de sécurité au travail

# PSITTACOSIS (ORNITHOSIS)

## A Summary of the Occupational Health Concern

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# PSITTACOSIS (ORNITHOSIS)--A SUMMARY OF THE OCCUPATIONAL HEALTH CONCERN

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# 1. INTRODUCTION

Psittacosis is an infectious disease of humans marked by flu-like symptoms. Chlamydia psittaci, which is one of several microorganisms that comprise the genus Chlamydia, causes psittacosis. The disease has been called psittacosis when it affects wild birds such as parrots, and ornithosis when it affects domestic birds. Although these terms have been used interchangeably, the more general term "chlamydiosis" might be preferable. Chlamydia psittaci infects wild and domestic birds, and poultry. Birds which contract the infection include parrots, canaries, pigeons, chickens, ducks, and turkeys. Sick birds show signs of:

- sleepiness
- shivering
- weight loss
- breathing difficulties
- diarrhea

Healthy birds can also carry Chlamydia psittaci organisms.

Stress associated with nutritional deficiencies, overcrowding, breeding, egg-laying and prolonged transport can cause birds to excrete the organism. People pick up the infection by inhaling the airborne agent in a contaminated environment or by handling an infected bird, its feathers or tissues.

When inhaled, Chlamydia psittaci microorganisms enter the lungs and start an infection. The number of psittacosis infections among Canadians at this time is not known.

# 2. OCCUPATIONS AT RISK

Psittacosis is an occupational health hazard for a large number of people whose work brings them into contact with birds. These include:

- bird fanciers
- pigeon fanciers
- poultry production workers
- poultry processing workers
- pet shop employees
- quarantine facilities employees
- veterinary clinics employees
- diagnostic laboratories employees
- racing pigeons keepers
- public health inspectors
- exotic and domestic bird breeders
- bird dealers

## 3. THE INFECTION

When a person breathes in Chlamydia psittaci microorganisms, the lungs' defense mechanisms attempt to neutralize them. The microorganisms that avoid the defense start an infection that varies in severity from a mild flu-like illness to a severe pneumonia. Generally the signs and symptoms appear within 4 to 15 days after exposure. These include:

- fever
- chills
- cough
- weakness or fatigue
- muscle and chest pain
- loss of appetite
- nausea
- vomiting
- diarrhea
- headache
- sweating
- abnormal intolerance to light

Psittacosis is primarily a lung disease, but it can involve several organs. Some reports show that inflammation of the liver, lining of the heart cavity, the heart muscle, and the brain can occur.

The course of the disease is variable and it can result in death. But fatal cases are rare. In mild cases, recovery occurs in about 10 days. In more severe cases, fever may continue for three weeks or more.

## 4. DIAGNOSIS AND TREATMENT

For accurate diagnosis of psittacosis, there needs to be a history of exposure to birds and evidence of infection in the suspected bird.

Laboratory examinations can identify the organism and detect the signs of infection. Patients who develop psittacosis require treatment with specific drugs.

## 5. PREVENTION

Preventive measures include feeding birds properly, avoiding overcrowding, and adequate ventilation systems. Clean cages are also important.

To control the infection in pet birds and domestic poultry it is necessary to add the antibiotic chlorotetracycline to their feed. But the owner or person in charge should contact a veterinarian for any treatment and subsequent testing that may be required.

Workers should know the potential risk of routinely mixing antibiotics into animal feed. In such situations there is concern that antibiotic-resistant bacteria might develop in workers who contact the animals or their feed. This resistance makes the traditional diseases more difficult to treat and control.

Workers should keep infected birds in isolation and ensure these places are properly ventilated. All persons involved with the care of infected birds should wear gloves and masks, and avoid dry sweeping or brushing when cleaning cages. At the end of an isolation period, they should clean the room and equipment used with disinfectants such as bleach.

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